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CENTRAL INTELLIGENCE AGENCY  
**INFORMATION REPORT**

COUNTRY Union of South Africa/South West Africa

REPORT

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X1 SUBJECT Mineral and Mining Production and Developments/  
March 1954 Quarterly Results

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1. "The Modder B mine on the East Rand has for some years been fully developed and this was the reason for the further fall in the ore reserve last year. The company reports that every effort is being made to slow down the ore reserve decline by judiciously exploiting marginal ore from the Hanging Wall Leader. In 1953, 50% of the tonnage supplied to the mill came from that horizon against 56% in 1952. The mine's narrow profit margin places it in a vulnerable position and in 1953 the further decline in the non-European labor available aggravated difficulties. The 1953 tonnage milled receded by 24 thousand tons to 651 thousand with a yield of 2.141 dwt. At the year-end, the available ore reserve dropped to 336 thousand tons (3.9 dwt) from 442 thousand (3.9 dwt). Future operations will be increasingly dependent on the successful exploitation of the marginal Hanging Wall Leader Reef.
2. "The application of East Rand Proprietary Mines for undermining rights in respect of two additional areas, 1,378 and 1,505 claims respectively, remains under consideration by the Mining Leases Board. When granted, these two areas will constitute extensions to the present mining property of 7,357 claims. The mine reports the continuation of development eastwards and in depth at the eastern and central sections during 1953. Satisfactory values were disclosed.
3. "Incline shaft sinking in those sections proceeded satisfactorily and stoping operations were started from three pilot winzes. It was possible to advance only limited development in the western section owing to the shortage of non-European labor. Permanent equipment has been installed at the southeast vertical shaft, and preparations made for the sinking of the counterpart subvertical shaft. Preparations have also been made for installing the permanent equipment of the central subvertical shaft.

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4. "Despite the improved electric power supply during the second half of 1953, the European and non-European labor shortage throughout the year caused the tonnage milled to decline by 178 thousand to 2,273,000 tons, but the yield was raised to 4.458 from 4.314 dwt. Over 1953, the available ore reserve declined by 390 thousand to 5,661,000 tons, averaging 5.6 dwt, against 5.7 dwt. However, there is a large potential tonnage of payable ore in the deeper levels of the mine not included in the reserve, the reason being the restriction of lateral reef development in advance of longwall stope faces. The mine has relieved and will relieve further the strain on its own internal power generating capacity by taking power from the Electricity Supply Commission's supplies. Stores and materials have become more readily available and steps were taken in 1953 to reduce stocks.
5. "The Transvaal Consolidated Land and Exploration Company has a 45% interest in the Platinum Prospecting Association No 3. During 1953, the Association continued underground exploration of the Boschkoppe property in the Rustenburg district, Transvaal. It also reopened and resampled old workings in its Brakspruit property, about 25 miles southeast of the Boschkoppe property. Diamond drilling and underground development at Brakspruit is being continued to a limited extent. The TCL company has leased out on tribute various of its properties for the working of asbestos, chrome and tin deposits. It also operates the Van Dyks Drift Colliery in the southern sections of the Witbank-Middelburg field. This colliery produces coal of a high grade and has adequate face room and equipment underground to meet any likely increased demand. Output in the second half of 1953 was restricted by the inadequate transport facilities. Drilling conducted by the colliery to the south of the Olifants river has indicated a large reserve of good quality coal there.
6. "The Durban Roodepoort Deep mine on the West Rand has applied for the lease of undermining rights in respect of 750 claims adjoining the western portion of its southern boundary. Additional equipment was installed in certain of the mine's shafts, and shaft-sinking proceeded during 1953, mainly in the No 1 east incline, the No 6A sub-vertical, the No 8 incline and the No 9 incline. The No 8 incline and, when completed, the No 9 serve the Kimberley Reef horizon.
7. "Although the mine is drawing a substantial tonnage from the Kimberley Reef horizon within its existing mining property, outside this area on the farm Klipspruit 11 a borehole drilled to ascertain the depths and economic importance of the Kimberley, Bird and Main Reefs was stopped at 6,238 feet after passing through the Kimberley Reefs without disclosing payable values. Six additional boreholes drilled in the western area of the mining property disclosed no values of an encouraging nature in the Bird Reef Series.
8. "At present, the mine does not work the Bird Reef. Through 1953, the tons milled receded by 25 thousand to 2,143,000; and at the year-end, the available ore reserve at 7,743,000 tons (4.3 dwt) reflected a decline of 245 thousand tons but a higher value of 0.1 dwt. The mine faced the same conditions in respect of labor and power supplies as the other mines.
9. "The East Geduld mine on the Far East Rand Basin exploits the Main Reef and during 1953, continued exploration of the Kimberley Reef horizon, but has now discontinued this operation in view of the disappointing values disclosed. The No 1A sub-vertical shaft was sunk to its final depth during 1953, and equipping is nearing completion. An ore stockpile for the mill has been constructed and two additional filters are being installed in the reduction plant. The 1953 tonnage milled declined by 115 thousand to 1,610,000 tons, and the yield was slightly higher at 6.03 dwt; the ore reserves were 500 thousand tons lower at 11,500,000 tons by the end of 1953, the average values remaining unchanged. The mine experienced the same conditions of labor and power supplies as other mines.
10. "Geduld mines on the Far East Rand Basin have virtually completed the mining of the Main Reef and in 1953 again concentrated development on the Black Reef horizon, where payability and values respectively increased by four percent and 10 inch-dwts to 26% and 227 inch-dwts. The retreatment plant for the sand dump was completed during 1953, but early in February 1954 was not operating to full capacity. Tons milled in 1953 were reduced by 128 thousand to 1,125,000 tons, and the yield increased by 0.29 dwt to 3.19 dwt. The ore reserves declined by 600 thousand tons to 2,500,000, while the average values rose to 180.2 from 176.8 inch-dwts.

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11. "Groetvlei mines has completed the erection of a waste rock crushing-plant to produce sand for the support of underground workings in its own property and in that of East Geduld mines. Through 1953, the tons milled declined by 113 thousand tons to 2,203,000; the ore reserves remained unchanged at 16 million tons averaging 218.5 inch-dwts.
12. "The Marieval mine on the Far East Rand Basin exploits both the Main and Kimberley Reef horizons, on which development in 1953 reflected increased payability and average values in both cases. Tons milled in 1953 improved by 26 thousand to 749 thousand tons, but the yield was reduced by 0.12 dwt to 4.89 dwt. The ore reserves increased by 100 thousand to 3,600,000 tons, and average values to 258.3 from 253 inch-dwts. Extended operations on the Kimberley Reef are indicated by the report that good progress has been made in cutting the incline haulage from surface to serve as an additional upcast airway and to prospect the upper levels of the Kimberley Reef. This haulage is expected to be connected with the underground workings about mid-1954.
13. "Van Dyk Consolidated mines on the Far East Rand has been granted a lease over an additional claim area which, consolidated with the previous lease area, has increased the mining property to 7,646 claims from 5,790. The lease formula covering the whole area has been revised to a slightly higher level. Primary development in 1953 declined considerably due to the labor shortage, the curtailment of operations in the old area as development in some sections was completed, and the restriction of operations in the more unpromising No 5 shaft sections.
14. "Development in the No 5 shaft area is being confined to a few major prospecting ends and preparing such payable ore for stoping as has been exposed. During 1953, a little more than half the total footage developed was in the No 5 shaft area. A considerable loss of tonnage and dislocation of work in 1953 resulted from two underground fires, but insurance covered the loss of profits. Tons milled fell by 224 thousand to 1,022,000, but the yield was raised by 0.36 to 3.31 dwt. At the year-end, the ore reserves were reduced by 200 thousand to 1,300,000 tons, the average values improving to 155.4 from 143.5 inch-dwts.
15. "Development operations in the St Helena mine of the Free State were continued during 1953 in the sub-outcrop zone north and south of the two shafts, No 3 incline and No 4 vertical. Stoping was confined to the No 8 and shallower levels; operations on 10 and 12 levels being confined to limited driving on reef from No 4 shaft. In the vicinity of the sub-outcrop itself, faulted blocks of ore have been opened up from vertical winzes. Only a limited footage was accomplished on the Leader Reef horizon, but payability and values were substantially higher. There was a marked decrease in development footage on the Basal Reef but the payable footage was only slightly reduced, while payability and values improved markedly. The reduced development was attributable to the labor shortage.
16. "At the end of 1953, the ore reserves reflected an increase of 750 thousand tons to two million, average values being 270.3 against 265 inch-dwts previously (5.3 dwt in each case). An interesting comparison is the ratio of total footage developed to the footage sampled: 57,966 to 26,110 feet in 1953, and 67,604 to 34,915 feet in 1952. During 1953, 202,974 tons of waste rock were hoisted; in addition, 621,801 tons of stoped ore and 199,559 tons of development rock were hoisted for milling and sorting. Tons milled increased by 201 thousand to 799 thousand tons, and the yield by 0.1 dwt to 4.06 dwt; the percentage sorted rose by 1.3% to 3.5%. Working costs decreased by 3s 9d to 42s 9d per ton. Diamond drilling and cementation operations were continued on a large scale and work was also advanced in controlling and limiting water coming elsewhere in the mine than from fissures. Drilling from surface was started and was still in progress at the year-end in order to elucidate geological problems and provide advance information for the development of the mine.

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17. "In order to attain the level of uranium production in accordance with the undertaking previously given, the West Rand Consolidated mine is now to increase the capacity of its uranium and sulphuric acid plants involving additional expenditure of about £550 thousand. A loan application has been made to cover this amount. The extensions and full production therefrom are expected to be effected by the end of 1954. The uranium sales contract will cover 10 years from the beginning of 1955. Loans received to the end of 1953 and interest thereon are being repaid over 10 years from the beginning of 1954 at the rate of £217,242 a year.
18. "Rietfontein Consolidated's uranium tests have not justified application for the mine to be considered as a uranium producer. Encouraging development results have been obtained adjacent to the new lease claims on the northeastern boundary and operations preparatory to the opening up of these claims have been expedited. A borehole in the new claims intersected the Main Reef at 349 feet assaying 357 inch-dwts, the core recovery being incomplete. The 1952 tonnage declined slightly to 322 thousand tons, the ore reserves at the year-end being 424 thousand tons averaging 263 inch-dwts.
19. "Uranium tests by the Vlakfontein mine have not justified an application for the mine to be considered as a uranium producer. In May 1953, the mine established the world sinking record for all types of shafts with an advance of 585 feet in its No 2 Circular Shaft, thus eclipsing the previous record of 504 feet established in the No 3 Virginia Shaft in the Free State.
20. "Through the year, the No 2 Vlakfontein Shaft was sunk 3,883 feet to a total depth of 6,362 feet, at an average rate of 324 feet a month. A connection was expected to be effected with No 1 shaft early in the current year. Development is being directed to the opening of the southwestern sections of the mine, which sections will be served by the No 2 shaft.
21. "Although overall percentage payability and values reflected an improvement over the 1952 figures, the tonnage so far developed in the southwestern section continued to disclose a lower grade than the average which was in turn reflected in a lower value of the ore reserve. At the year-end, this amounted to 1,358,000 tons averaging 346 inch-dwts, the increase being 11 thousand tons. Tons milled in 1953 were reduced by one thousand to 446 thousand tons, the yield being 7.219 dwt against 7.388 dwt.
22. "One of the designated uranium producers, the Vogelstruisbult mine on the Far East Rand Basin exploits both the Main and Kimberley Reefs, the latter being the main uranium carrier of the area. This mine adjoins the southern boundary of the Daggafontein mine, which has been producing uranium for almost a year and which extracts uranium oxide from a combined feed of current and accumulated Kimberley Reef slimes and flotation concentrates from current and accumulated Main Reef slimes. It is possible that the same procedure may be followed at Vogelstruisbult, which is expected to commence the output of uranium oxide in the near future
23. "During 1953, the mill capacity was increased by 25 thousand tons a month; and through the year, the tonnage milled was advanced by 189,500 to 1,180,000 tons, the yield declining to 5.051 from 5.203 dwt. Full production at 100 thousand tons a month is now being maintained by resorting to Sunday milling. The 1953 development footage was lower than in 1952, and the reduced payability was due mainly to the lower payability on the Main Reef; Kimberley Reef results however were reported as being very satisfactory. Despite the higher milling rate and the reduced development footage, the ore reserve at the end of 1953 increased slightly to 3,189,000 tons, the average values being unchanged at 233 inch-dwts. This increase was due to Kimberley Reef development in favorable areas and to the addition of a small tonnage through stoping.

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24. "One of the old mines of the Central Rand, the Robinson Deep is extending its Chris West Sub-incline and No 2 Turf Shafts to open up deeper levels of the mine, as well as the Turf West Sub-incline Shaft. The Main Reef, Main Reef Leader and the South Reef are worked on the property. In 1953, the payable ore grade developed improved further, due primarily to satisfactory disclosures in the bottom levels of the Main Reef Leader, particularly west of the Chris Sub-incline Shaft. The 1953 tonnage milled declined by 166 thousand to 1,165,000 tons, but the yield was raised to 3.933 dwt from 3.369 dwt. The ore reserve at the year-end was calculated at 1,351,000 tons, a decline of 405 thousand tons, the average values being only slightly lower.
25. "Also one of the old mines of the Central Rand, Simmer and Jack, has been granted a lease over an additional 242 claims adjoining the southwestern sections on the southern boundary. These sections and the claims are served by the West Sub-vertical Shaft, from which a considerable amount of lateral development has been accomplished. However, payability at depth in this area as well as in the central and eastern sections has been lower than anticipated. Consequently, tonnage in these areas cannot be replaced as rapidly as it is mined. Ore resources in the central area below the 53 level are being rapidly depleted, but with the improved ventilation facilities available, it has been possible to extend operations back into the eastern section, where ventilation conditions were previously bad and where consequently operations were temporarily suspended.
26. "Considerable tonnages of ore exist in the old upper areas of the mine and await investigation, but the native labor shortage has seriously hampered this work. Investigation conducted has continued to yield satisfactory results and some tonnage is being obtained from this source. The 1953 tonnage milled rose by two thousand to 1,483,000 tons, and the yield to 3.203 from 3.196 inch-dwts. Over the year, the ore reserve decreased by 553 thousand tons to 1,610,000 tons, the value being unchanged at 3.9 dwt.
27. "The joint No 3 vertical shaft of the Western Reefs and Vaal Reefs mines has now been completely equipped and the shaft is operating under normal conditions. In the joint No 3 sub-vertical shaft, the permanent hoists are operating and the installation of the permanent shaft equipment has been almost completed. All work, including the cutting of the ore and waste pass systems, should be completed in the sub-vertical shaft in the near future.
28. "The Western Reefs company has applied for a mining lease over about 630 claims on the farm Goedgenoeg 62 to the west of the existing lease area, which extends over about 8,639 claims in the Klerksdorp district. The uranium plant, which was officially opened early in December 1953, is assumed to have entered the phase of full production from the beginning of 1954. The sales contract will operate for 10 years from the latter date, as will the terms of the repayment in respect of the loans and interest thereon. The final cost of the uranium and sulphuric acid plants is estimated at £5,290,000, excluding interest on the loans; by the end of 1953, total expenditure had amounted to £5,320,636, including interest.
29. "Each year unredeemed capital expenditure by the gold mines can be set against taxes and lease payments to the extent of 27½%, and expenditure on the uranium program falls under this heading. Over the last two calendar years, Western Reefs' liability for lease payments and taxes has been negligible. Henceforth, there will be substantial decreases in the annual redemption allowances, since the uranium capital program has been virtually completed. Against this contingency, however, the uranium reserve has been established and at the end of 1953 amounted to £550 thousand. Through 1953, 1,312,500 tons were milled with a yield of 4.1 dwt, against 1,345,000 tons and 4.2 dwt in 1952. The lease area is known to be faulted above the average, and in this connection, which is perhaps comparable to conditions in sections of the Free State field, it is interesting to note that of 83,153 feet developed in 1953, 42,700 feet sampled averaged 10.55 dwt over 22.99 inches, or 243 inch-dwts, 21,800 feet or 51.1% proved payable averaging 16.19 dwt over 26.58 ins or 430 inch-dwts. Most of this footage was accomplished on the Gold Estates Reefs of the Kimberley-Elsburg Series, which - except for development rock probably - were the horizons from which the ore milled was drawn. Included in the above was the following footage developed on the Vaal Reef horizon: 17,261 feet advanced, 2,815 sampled, 2,565 feet or 91.1% payable, averaging 100.89 dwt over 8.9 ins or 898 inch-dwts.

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30. "In addition to the above development, 7,225 feet were advanced in the Goedgenoeg area, 3,751 on reef, 3,755 sampled 1,405 feet or 37.4% payable, averaging 11.91 dwt over 40.42 ins or 481 inch-dwts. The following were the ore reserve data for the end of 1953: pay limit 3.2 dwt; 4,763,000 tons; averaging 4.88 dwt over 47.46 ins or 232 inch-dwts. Except perhaps for a small proportion of development rock, all the ore milled in 1953 and the tonnage treated in the uranium plant was from the Gold Estates horizon.
31. "For the purposes of repaying the uranium loans and interest and of the uranium sales contract, the 10-year period for the Daggafontein mine began on 1 Jan 54, when the uranium and acid plants were regarded as having entered the phase of full production. The Daggafontein plants were commissioned for production in May 1953, and their estimated cost excluding interest was about £4,425,000; by the end of 1953, the total expenditure including interest was £4,578,724. By the year of 1953, the estimated net uranium and acid profit amounted to £644,991.
32. "In respect of taxes and lease payments, which have been at reduced levels in recent years, the same comments apply as with Western Reefs; the contingency of future increases in these liabilities has been met by the establishment of a uranium reserve, which at the 1953-end stood at £800 thousand. The major uranium carrier in the mine is the Kimberley Reef horizon; the combined feed to the uranium plant consists of current and accumulated Kimberley Reef slimes and flotation concentrates from current and accumulated Main Reef Leader slimes.
33. "The following are certain operating returns in 1953: tons milled 2,609,500 tons yield 4.7 dwt; Main Reef Leader - 23,701 ft developed, 20,670 ft sampled averaging 224 inch-dwts, 12,615 ft payable or 61% averaging 339 inch-dwts; Kimberley Reef - 39,351 ft developed, 34,185 ft sampled averaging 190 inch-dwts, 13,525 ft or 39.6% payable averaging 421 inch-dwts; ore reserve data - pay limit 2.8 dwt, 13,776,600 tons, 5.48 dwt or 240 inch-dwts; the ore reserve includes 5,362,100 tons on the Kimberley Reef; the gold and uranium working profits in 1953 were respectively £3,994,717 and £644,991 compared with the gold working profit only of £4,869,401 in 1952; taxation £2,075,029.
34. "The East Daggafontein mine in 1953 milled 1,104,500 tons for a yield of 3.5 dwt. On the Main Reef Leader, 26,225 ft were developed, 20,625 ft sampled averaging 83 inch-dwts, and five thousand ft payable or 24.2% averaging 218 inch-dwts. On the Kimberley Reef, 24,001 ft were developed, 20,610 feet sampled averaging 79 inch-dwts, and 3,605 ft payable or 17.5% averaging 300 inch-dwts. The ore reserve data at the end of 1953 was as follows: pay limit 3.3 dwt, 4,332,400 tons, averaging 4.35 dwt or 160 inch-dwts. The 1953 reserve includes 1,261,000 tons averaging 5.48 dwt or 203.4 inch-dwts. Uranium tests have been conducted but uranium production is not contemplated.
35. "The South African Land and Exploration mine reports that in view of the increased demands for European and native labor to meet the expansion in the mining industry, a marked improvement in the existing labor shortfall cannot be expected during 1954. Through 1953, the tonnage milled declined to 1,204,500, with the yield slightly higher at 3.65 dwt in 1953. The ore reserve position at the end of 1953 was as follows: pay limit 3.4 dwt; 3,198,200 tons; 5.22 dwt or 217 inch-dwts.
36. "At Crown Mines during 1953, about 75% of the Main Reef Leader developed in the lower levels of the mine were advanced in the western sections. There normal development and further sinking of two incline shafts were continued. Values were maintained. Development in the central section was again selective but the values were not encouraging. Development in the eastern section was again confined to the more promising areas with steady progress made in preparing shaft pillars for extraction. Operations are largely concentrated on the Main Reef Leader, the footage on the Main and South Reefs being relatively small.
37. "Despite the labor shortage, the tonnage milled increased slightly and costs were reduced by 8d to 36s 1d per ton milled due to a marked increase in the ore tonnage drawn from surface dumps: 3,272,000 tons milled reflected the increase of 19 thousand with the yield reduced to 3.17 from 3.185 dwt. In addition, 195,550 tons of Worcester Dump sand was profitably treated. Over 1953, the ore reserves decreased by 1,067,000 tons to 12,208,000, the value remaining unchanged at 4.9 dwt, the inch-dwts being slightly higher at 237.16.

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38. "Although the City Deep mine is passing through a difficult phase allowing very little flexibility in its mining operations, and faces a program of heavy capital expenditure for some years to come, the outlook is not altogether discouraging, for three main reasons. During 1953, an earlier decision to change over from hanging wall rescue methods of stopping to underhand longwall stoping was implemented wherever possible. Combined with certain other measures, this change over was reflected in 1953 in a very satisfactory reduction of working costs by 2s 1d to 45s 2d per ton, notwithstanding the severe labor shortage. The second reason lies in the expectation that the so-called "K" line of sub-incline shafts will be sufficiently advanced by the second half of 1954 to facilitate drawing a greater tonnage from the Main Reef Leader in the lower levels of the mine gradually thereafter. The third reason is derived from the improvement in the mine ventilation system effected in 1953, which will be of benefit to operations in the deeper levels: this improvement will be extended further in the future.
39. "Through 1953, the great depth of mining operations again limited the selection of working faces, and reduced the grade of ore mined and therefore the yield, conditions which regarding revenue were aggravated by the lower gold premium received. However, despite the labor shortage, the tonnage milled was raised by 71 thousand tons to 1,922,000 with the yield reduced by 0.199 dwt to 3.861; and the development footage was increased by 7,760 feet. The ore reserves decreased by about 517 thousand tons to 5,700,000, averaging 5.8 dwt or 247.7 inch-dwts, a slight decline.
40. "The operations of the Rose Deep mine in 1953 were again adversely affected by the rise in working costs and the lower gold premium, as well as by the labor shortage. Accordingly, towards the end of 1953 it was decided to close down Nos 1 and 2 shafts, where the scattered working faces were absorbing an unduly high proportion of the available labor. The upper and middle sections of the mine have now been completely opened up, and only restricted development in the deeper, southern levels can be anticipated. Development footage and the tonnage developed will therefore continue to decline. The 1953 tonnage milled fell by 118 thousand to 865 thousand but the yield improved by 0.188 to 2.99 dwt. At the end of 1953, the ore reserves were 375 thousand tons lower at 1,394,000, the average value being unchanged at 3.9 dwt, the inch-dwts declining slightly to 228.54.

#### 41. MARCH QUARTERLY RESULTS:

- "Features of the March 1954 gold mining returns included the marked reduction in working costs by the Transvaal gold mines to 37s from 38s 1d per ton; and the considerable increase in milling by the five Free State producers to 263 thousand from 239,500 tons in February 1954. Only Western Holdings milled less in March 1954, but increased the grade substantially to raise the yield to 7.016 from 6.255 dwt per ton in February 1954; the higher milling by the two Freddie's mines being especially welcomed. These two mines are to merge into one operating unit and additional capital is to be provided.
42. "All the five uranium-gold producers raised the milling rate in March 1954, the increases by Blyvooruitzicht and West Rand Consolidated being marked; higher gold yields were effected by Blyvooruitzicht, Stilfontein and West Rand Consolidated to a slight but welcome extent, while the lower yields by the Daggafontein and Western Reef mines reflected only minor changes.
43. "In March 1954, the 49 listed gold and uranium-gold producers in the Transvaal and Free State milled 5,153,700 tons for a yield of 3.978 dwt per ton, against 4,637,600 tons and 4.065 dwt respectively in February 1954; March 1954 miscellaneous output improved to 49,202 ounces fine from 36,983 in February 1954. Over the first three months of 1954, the 49 mines milled 14,684,500 tons for a yield of 4.011 dwt per ton or 2,945,332 fine ounces, the average working costs being 38s 9d per ton and 19s 7d per fine ounce. Additional miscellaneous output amounted to 123,733 fine ounces, the overall total output being 3,069,065 fine ounces.

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44. "According to the Strathmore group quarterly reports for the first three months of this year, the Stilfontein mine increased its milling by 15 thousand tons to 226 thousand and the yield to 6.315 dwt from 6.101. The gold working profit advanced to £378,509 from £332,605; and the additional net uranium profit increased to £71,575 from £44,833, subject to adjustment. Expenditure on the uranium project in the first quarter, £164,210 against £486,930, indicates that completion is near at hand. Full production should therefore be achieved in the near future. The total development footage was maintained; payability was only slightly changed at 80.5% but values increased to 423 from 365 inch-dwts. Development is on the Vaal Reef horizon.
45. "The Ellaton mine has completed its pipeline for transferring its slime residues to the Stilfontein uranium plant. The first quarterly production saw 71 thousand tons milled for a yield of 4.921 dwt per ton, and a working profit of £49,392. Total development increased to 10,560 feet from 9,852, the sampled footage was 5,010 feet against 3,015, payability was 96% against 97%, but values were reduced to 502 from 545 inch-dwts. Development is on the Vaal Reef horizon.
46. "Sinking operations were continued at the Buffelsfontein mine in the Pioneer Main and Ventilation shafts [26 Apr 54].
47. "The following are items of interest from the quarterly reports of the New Consolidated Gold Fields group, for the three months to 31 Mar 54. The Vlakfontein No 2 shaft was sunk 448 feet to its final depth of 6,810 feet. At the Rietfontein Consolidated mine, payability increased to 66% from 43.5%, and values to 569.9 inch-dwts from 350.8. The lower expenditure on the uranium project by the Vogelstruis-bult mine indicated that the plant construction is nearing completion; markedly improved development results were obtained on the Kimberley Reef, payability rising to 47.3% from 37.6% and values to 358.1 from 289.7 inch-dwts; on the Main Reef, payability decreased to 36% from 38.2% but values rose to 355 from 311.3 inch-dwts.
48. "Simmers reported higher payability and values, 35.5% and 285.6 inch-dwts against 32.6% and 243.5 inch-dwts, the improvements being obtained on the Main and South Reefs.
49. "Robinson Deep raised the grade to give a yield of 4.24 dwt against 4.096 dwt, and working profits improved to £63,804 from £40,297.
50. "Uranium production is expected from the Luipaards Vlei mine in the not distant future: 325 thousand tons were milled last quarter against 312 thousand in the final 1953 quarter, the yield improving to 3.745 dwt from 3.706, and the gold working profit to £124,391.
51. "General improvements were noted in the Libanon mine report: tons milled rose to 279 thousand from 263 thousand tons and the yield to 4.112 from 4.088 dwt per ton, and working profits to £152,619 from £136,350; Ventersdorp Contact Reef development reflected considerable improvement - payability rising to 68.4% from 54.6% and values to 462.5 from 367.8 inch-dwts; Main Reef payability improved but values were lower.
52. "At West Driefontein - one of the designated uranium producers - a higher rate of sinking was achieved with 254 feet to 2,378 feet, compared with the previous figure of 94 feet; sinking the No 5 shaft was reported for the first time, a depth of 80 feet being recorded as having been reached; a small advance in tons milled was reported, the yield rising to 15.056 from 14.859 dwt and the working profits to £846,096 from £801,878; the development and sampled footage improved payability remained at 100% and values advanced to 844 from 798 inch-dwts.
53. "Doornfontein - a new gold producer and a declared uranium mine - advanced its milling to 145 thousand tons against 84 thousand in the previous two months, and the yield rose to six from 5.578 dwt per ton, while the working profits advanced to £175,608 from £48,852; payability and values were 74.9% and 315 inch-dwts, against 76.5% and 382 inch-dwts; No 1 shaft was sunk 334 feet to 5,888 feet against 488 feet in the previous quarter.

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54. "Among the Corner House reports for the first quarter of 1954, that for the Elyvooruitzicht mine recorded that the net uranium profits advanced to £243,233 from £147,210, subject to adjustment. The fact that repayments of the uranium loan and interest thereon has not yet been started may reasonably be interpreted as signifying that full production has not yet been reached, while the small amount expended on the uranium project in the first quarter probably indicates that it has been virtually completed. The reason for the small increase in the total working profit may be sought in the short working month of February, the slightly reduced yield and lower gold price, and, of course, the fact that full uranium output has not yet been effected: this working profit amounted to £1,547,769 against £1,538,127.
55. "At the Durban Roodepoort mine, payability declined to 68% from 73.2% but values improved to 415.8 from 362.6 inch-dwts; the No 9 incline shaft was sunk 94 to 236 feet.
56. "The main point of interest in development in the E R P M mine lay in the higher values reported: 504.4 inch-dwts against 453.6; the southeast sub-vertical shaft was sunk 336 feet to 357 below the collar on the 42nd level.
57. "At the Harmony mine in the Free State, the No 3 shaft was completely stripped and 3,310 feet of equipment installed. The shaft was sunk to its final depth of 5,380 feet in the previous quarter. Although payability declined to 92.7% from 99.2%, Basal Reef values recovered to 688 inch-dwts from 450; from the start of development to 31 Mar 54, payability has been 94.7% and average values 14.9 dwt over 42 inches or 624 inch-dwts; the stope preparation program has been started in the Ventilation Shaft area. Erection of the reduction plant proceeds satisfactorily; erection of the uranium plant has been somewhat retarded owing largely to the late arrival of certain plant and equipment. The complement of European and non-European labor was reported as satisfactory.
58. "Modder East reported a decline in payability to 15% from 24.3%, but values improved to 176.7 from 140 inch-dwts.
59. "Transvaal Gold Mining Estates has given notice of the possible cessation of operations at its Glynn's Section, but every effort continues to be made to locate possible extensions of the payable orebody in its Malieveld mine.
60. "At the North and South Reduction Plants (gold only) of the West Rand Consolidated mine in the General Mining group, milling in the first quarter was unchanged at 498 thousand tons and the yield was very slightly higher at 2.961 dwt against 2.956; the net working profit advanced to £197,509 from £163,762. At the West Plant (gold and uranium), the tons milled fell off by one thousand to 149 thousand tons and the yield declined further to 1.513 from 1.741 dwt; the net profit from the gold and uranium operations amounted to £320,308 against the previous figure of £255,322 giving an overall profit in the first quarter of £517,817 compared with the previous figure of £419,084. For the first quarter of 1954, the taxation provision amounted to £187 thousand compared with the previous figure of £117 thousand; while the first quarterly installment of repaying the uranium loan funds received up to 31 Dec 53 was £54,311. After allowing for the liabilities mentioned, the net overall profit in the first quarter 1954 amounted to £276,506, compared with £302,084 in the previous. The uranium and sulphuric acid plants are now being extended to a greater capacity.
61. "In the first quarter 1954, Rand Leases in the Anglo-Transvaal group raised its milling to 486 thousand from 471,500 tons, for respective yields of 3.43 and 3.46 dwt per ton; working costs were reduced to 39s 10d from 41s 5d. Shaft-sinking is now in progress in the No 1 Tertiary shaft, a circular unit 17½ ft diameters inside the lining. Payability in development declined to 40% from 49% but values rose to 239 from 215 inch-dwts.

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62. "At the Virginia mine, development in the No 2 shaft area was suspended temporarily as an upcast ventilation unit. In the No 1 shaft area, preparing for stoping was started; results on reef were lower than the overall returns in the previous quarter. Trial milling operations continued, some stoped ore being treated with the bulk of development rock; extensions to a milling capacity of 75 thousand tons a month are in progress; uranium and acid plant construction proceeds. Capital expenditure to 31 Mar 54 amounted to £10,211,843, including £1,093,205 on the uranium and acid plants.
63. "Compared with the last quarter for which development results were published, namely the third in 1953, the Marriespoint report for the first quarter of 1954 reflects a very considerable improvement indeed: of 320 feet sampled in the first quarter, 85.9% proved payable averaging 563 inch-dwts, compared with 915 feet sampled, 57.4% payable averaging 273 inch-dwts in the third quarter last year. Preparations for the resumption of sinking No 2 shaft were nearly completed at 31 Mar 54. At the same date, capital expenditure amounted to £3,686,104. High average sinking rates are being maintained in the two Hartebeestfontein shafts, in which sinking and equipping is proceeding concurrently: in the first quarter, No 1 shaft was sunk 982 feet to 2,136 feet; No 2 shaft was sunk 1,096 feet to 1,761. Capital expenditure to 31 Mar 54 amounted to £2,674,230.
64. "Jointly with New Consolidated Eastern Areas Limited, the Middle Witwatersrand Company has acquired options over about 195 thousand claims in the Bethal, Ermelo and Standerton districts of the Eastern Transvaal. So far, 13,836 feet have been drilled in eight completed boreholes, and in another, 944 feet deep at 31 Mar 54, drilling continued. No gold values have been reported.
65. "The new reduction plant at the Sheba Mine of Eastern Transvaal Consolidated Mines in the Northeastern Transvaal is well advanced; the reduction plants of the New Consort and Agnes Mines in the same area are being rearranged and foundations prepared. The New Consort power plant is being extended.
66. "The Marievale mine in the Union Corporation group reported milling at 188 thousand tons in the first quarter against 186 thousand in the last 1953 quarter, and an increase in the yield to 5.07 dwt from 4.91. However, working costs advanced to 41s 5d from 39s 8d per ton. Payability on both the Main and Kimberley Reefs and the values obtained were at lower levels in the first quarter compared with the returns for the last quarter of 1953.
67. "At the St Helena mine in the Free State, the milling rate improved to 230 thousand tons and the yield to 4.38 dwt in the first quarter from 223 thousand tons and 4.21 dwt respectively in the final 1953 quarter. Working costs, however, remained unchanged at 41s 6d per ton. The working profit advanced to £138,511 from the previous figure of £111,916. The feature of the development results was the appreciable improvement in Basal Reef payability to 65% from 59% and in the values to 509 inch-dwts from 371.
68. "In view of the proposed amalgamation of the Freddie's North and South mines of the Johannesburg Consolidated Investment group and the difficulties experienced by these two mines in coping with the 'khaki' shale bands in the hanging wall in sections of the two mines, considerable interest attaches to the quarterly reports. In the first quarter, Freddie's North advanced a total of 6,433 feet in development: 2,390 in haulages, 802 in winzes and raises, and 3,241 in crosscuts etc. Of the 815 feet sampled, 625 feet or 76.69% proved payable averaging 340 inch-dwts; in the previous quarter, 6,161 feet were developed, 545 feet sampled, 430 or 78.9% payable averaging 318 inch-dwts. Tons milled reached 87 thousand tons in the first quarter against 76 thousand in the preceding period, the corresponding yields being 3.79 and 3.87 dwt per ton.
69. "In the case of the Freddie's South mine, a total of 7,013 feet were advanced in the first quarter: 2,872 in haulages, 93 in drives, 1,203 in winzes and raises, and 2,845 in crosscuts etc; of 1,205 feet sampled, 965 feet proved payable or 80.1% averaging 310 inch-dwts. There was a substantial increase in the tonnage milled to 109 thousand from 88 thousand, the corresponding yields being three and 3.15 dwt per ton. In the case of both mines, stoping and milling continued on a limited but gradually increasing scale; the number of stope faces available remains inadequate

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70. "At the East Champ d'Or mine, now a uranium producer, operations continue to be transferred from the reefs normally worked for their gold content to the uranium-bearing Bird Reefs. However, the low gold content of the Bird Reef ore reduces the overall grade milled and consequently the revenue from gold. Slimes residues are being pumped to the Randfontein Estates uranium plant, which has now been in operation a short while [redacted] The first declaration of uranium profits is expected in the near future, probably for the month of April 1954. In the first quarter, 70 thousand tons were milled against 67 thousand in the preceding period, the corresponding yields being 1.974 and 2.68 dwt.
71. "At the uranium plant of the Randfontein Estates mine, operations in March 1954 were on an increasing scale but full capacity output has not yet been reached. Extensions to the plant are in progress. Mining operations in the first quarter continued to be transferred to the uranium-bearing Bird Reefs, which have a lower gold grade than the reefs normally exploited for their gold. In the first quarter, 835 thousand tons were milled for a yield of 2.86 dwt per ton, against 908 thousand tons and 2.56 dwt in the previous period.
72. "The pyrite recovery plant, presently being constructed at the Government Areas mine, is expected to be commissioned before mid-1954. The original plans have been revised, and the cost increased to about £500 thousand from the original estimates of about £360 thousand, indicative of an increase in the capacity. The tons milled and yield in the first quarter were 765 thousand and 2.56 dwt, against 749 thousand and 2.61 dwt in the final 1953 quarter.
73. "The main interest in the quarterly reports of the Anglo American group lay in the returns of its Free State mines and in the uranium declarations of the Western Reefs and Daggafontein mines.
74. "During the first quarter of 1954 Free State Geduld development was advanced 13,485 feet, compared with 11,331 in the previous period; it is assumed that most of this footage was in haulages, drives and crosscuts. No footage was reported in respect of the No 2 shaft area; there, 35 feet averaged 2,304 inch-dwts in the preceding quarter. In the No 1 shaft area, 63 feet were advanced on Basal Reef, 50 feet sampled averaging 1,316 inch-dwts; in the preceding quarter, 30 feet averaged 1,076 inch-dwts. Water-bearing fissures continued to retard development. Additional pumping capacity has been and is being provided. The reduction plant is being erected [redacted]
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75. "At Western Holdings in the first quarter, milling increased by three thousand tons to 137 thousand and the working profit to £130,109 from £91,508. Development totalled 17,177 feet against 18,929, mostly it is assumed in haulages, drives and crosscuts; 3,595 feet were sampled averaging 678 inch-dwts, compared with 5,760 feet averaging 561 inch-dwts in the previous quarter. The haulage towards the Free State Geduld property was advanced 200 feet to within 800 feet from the common boundary; a second boxhole to the Basal Reef was cut, and reef sampling averaged 1,092 inch-dwts compared with values of 7,518 inch-dwts in the first boxhole cut in the previous quarter. Milling capacity is being extended to 125 thousand tons a month.
76. "At the President Brand mine, test runs were started in the reduction plant, where construction continues. Equipping the No 2 shaft was completed, and development in station cutting and crosscutting to Basal Reef advanced. In the No 1 shaft area, total development increased to 14,731 feet from 9,391 feet; 3,140 feet were sampled averaging 1,606 inch-dwts, compared with 2,275 feet and 1,769 inch-dwts in the previous quarter.
77. "The two President Steyn shafts were connected in the first quarter, and the mine has now [redacted] entered the production stage proper. The reduction plant has been completed to a capacity of 75 thousand tons a month, and extensions to 125 thousand tons a month are in progress. The uranium plant is being erected. Total development declined to 19,566 feet from 24,619; 3,385 feet were sampled averaging 557 inch-dwts, compared with 5,220 feet and 536 inch-dwts in the previous quarter.

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78. "Preliminary development, mainly station-cutting and crosscutting to the Basul Reef, was started in the completed No 2 Lourine Shaft. In the No 1 shaft area, total development increased to 14,061 feet from 9,136 feet; 1,540 feet sampled averaged 237 inch-dwts with the payable footage at 63.64% averaging 327 inch-dwts; in the previous quarter, 1,735 feet sampled averaged 242 inch-dwts, with payability at 61.96% averaging 347 inch-dwts. Erection of the reduction plant continued.
79. "The two Welkom shafts are to be deepened; sinking operations in the No 2 shaft are expected to be resumed in the quarter ending 30 Jun 54. The reduction plant is being extended to a capacity of 125 thousand tons a month. Erection of the uranium plant continues.
80. "With reference to underground development in the Free State mines generally, especially those in the Odendaalsrus sector - the northern section of the gold-field, water-bearing fissures continue to retard development. Faulting in the northern sector is known to be relatively extensive; however, it is not known what proportion of the total development footage is involved in crosscutting to ore faulted out of the line of strike or dip.
81. "In respect of the Western Reefs and Daggafontein reports, some disappointment was evoked by the high ratio of the repayments of the uranium loans and interest to the net earnings from uranium production, and by the fall-off in the gold working profit concurrently with the development of the uranium operations.
82. "Little comment is possible in respect of the first factor, which may be mitigated if it can be assumed that full production has not yet been reached, and that in the case of Western Reefs the Gold Estates Reefs residues presently the feed to the plant will be enriched by admixture later with Vaal Reefs residues when the latter ore is mined; and if it can be assumed that in the case of Daggafontein the combined feed of Kimberley Reef residues and Main Reef concentrates is of a lower uranium grade than the former alone. In respect of the second factor, it should be remembered that the gold grade is adjusted to a level of payability concurrent with uranium production that is related to conserving the ore reserves and at the same time providing shareholders with an adequate return on the funds invested. This, of course, may or may not be closely related to the prevailing market price of the shares at any given time. Once production of uranium is more or less stabilized, it will doubtless be seen that the gold grade itself will become stabilized, at any rate within certain limits. This comment applies to mines exploiting more than one reef horizon to a greater degree than to those exploiting only one reef horizon; however, even in the latter case, the grade will be adjusted to lower levels than would be done in the absence of the uranium program. In both cases the process of adjustment would become increasingly more marked as payability recedes from the 100% mark or in other words, as the percentage of unpayable ore increases. The principal benefit of lowering the grade through the profitable treatment of larger tonnages of low grade ore is the extension of a property's life and the reduction of the factor of investment amortization.
83. "In the first quarter of 1954, Western Reefs had gold working profits of £194,599 and estimated net uranium profits of £270 thousand - a total of £464,599. The quarterly repayment on the uranium loans was £151,193, and there being no tax and lease liability, the net amount was £313,406. In a little more than the final three months of 1953, the estimated net uranium profit was £228 thousand, and the final quarter's gold working profit was £214,108. The feature of the development results was again the values on the Vaal Reef horizon: 1,365 feet sampled averaging 530 inch-dwts, compared with 1,090 feet sampled averaging 700 inch-dwts in the previous quarter.
84. "At the Daggafontein mine, the first quarter's gold working profits were £909,177, and the estimated net uranium profits £313 thousand, a total of £1,222,177; the tax and lease liability was £574,900 and the quarterly repayment of the uranium loans £127,825; the net profit was therefore £519,452.

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85. "At the South African Land and Exploration mine, the sampled footage averaged 236 inch-dwts, payability was 36.3%, and the payable footage averaged 554 inch-dwts.
86. "Development at Springs reflected improved values: in the first quarter the sampled footage averaged 288 inch-dwts, payability 38.7%, and the payable footage 663 inch-dwts.

87. "The discovery of a promising deposit of titanium sands near Port Elizabeth has been reported [REDACTED]

88. "The Union Corporation reports that its subsidiary - Capital Mining Areas - has located payable Kimberley Reef in a limited area located in the Bethal district, and it is assumed that this area is in the zone between Kinross and Trichardt where most of the drilling has been conducted [REDACTED] The area is believed to be sufficiently large to justify underground prospecting in due course. Further drilling will be conducted in order to define more accurately the zone of payability. The report states that apart from the area mentioned above, no values of economic importance have yet been obtained in the ground under option to five other subsidiary companies which also have interests in the Bethal district.

89. "The Randfontein Estates mine has secured a mining lease over an additional area of 424.5 claims situated on the farm Middelvlei 28 [REDACTED]

90. SOUTH WEST AFRICA:

"The Uis Tin Mining Company of South West Africa has experienced a shortage of capital for some time and has no further funds from which immediate payment of creditors can be paid. Certain creditors are now pressing for payment, and accordingly the Directors have applied to Court for an order of judicial management and the appointment of a judicial manager. If the order is granted, Frobisher Limited - the subsidiary of Ventures Limited - has undertaken to advance the Uis company £75 thousand under conditions of priority for repayment agreed to by the existing creditors in meeting. This sum will be used to acquire additional essential equipment necessary for the attainment and maintenance of full milling capacity. The scale of production envisaged is deemed large enough to repay the creditors and to facilitate the lifting of judicial management within the foreseeable future.

91. "At 50% capacity maintained in January and February 1954, the respective outputs of 33.2 and 32.4 long tons of tin concentrates approximately balanced the monthly expenditure at the mine. The March 1954 output of 35 long tons and the yield therefrom exceeded the monthly expenditure. The Board of Directors has now been reconstituted, and the following representatives of Frobisher Limited have been appointed: Messrs H H Hemming, M R Jennings, and B G Edward.

92. "The Uis company presently holds claims and mining areas three to four miles wide and 20 miles long in the Uis and Omaruru areas of South West Africa. The pegmatites surveyed are within a radius of three to four miles of the treatment plant, and these are estimated to contain about 25 million tons of ore down to a depth of 100 feet. Development to the production stage was accompanied by many and considerable difficulties: mainly, the critical shortage and poor quality of artisan labor in 1953; delayed deliveries of steel, equipment and materials; some wrongly designed concentrating equipment involving delays in their replacement. By the beginning of 1954, many of the difficulties had been overcome, and production had been raised to slightly more than 50% capacity. The staff position has now been improved, and it is hoped that output will steadily expand.

93. "From August 1953 to the end of March 1954, output aggregated 196.4 long tons of tin concentrates averaging about 70% metal. Mining operations suffered from the temporary native labor shortage in 1953 and from the delayed delivery of certain loading and blasting equipment. These factors limited operations to low grade sections, below the average grade. However, this phase has neared its end; during

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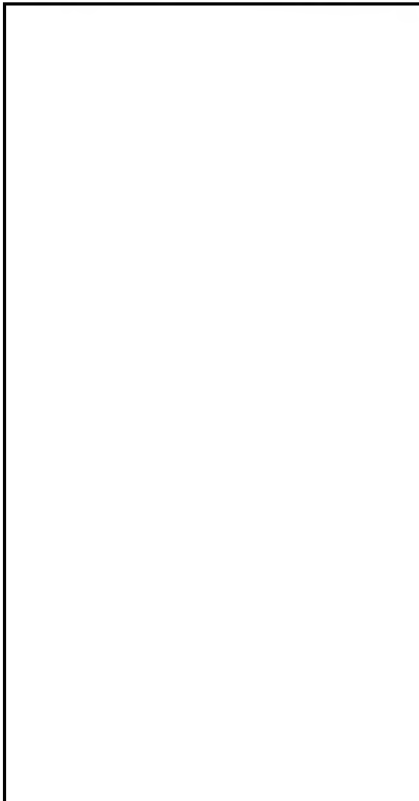
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the coming months it should be possible to mine pegmatite so as to include the higher grade contact zones and thereby raise the yield.

94. "Assays of the tin concentrates have disclosed two to eight percent of tantalum-columbiwn pentoxides in the tin concentrates, and an indicated average between three and four percent. Large pegmatites, seven and 10 miles south of Uis, have been prospected with indications that tantalite-columbite predominate and that the cassiterite occurs as a minor constituent. Test results are awaited. The company has a contract with the US Defense Procurement Agency for the supply of tantalite-columbite."

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## LIBRARY SUBJECT &amp; AREA CODES



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